

| S | R | Q | Q_next  |
|---|---|---|---------|
| 0 | 0 | 0 | 0       |
| 0 | 0 | 1 | 1       |
| 0 | 1 | 0 | 0       |
| 0 | 1 | 1 | 0       |
| 1 | 0 | 0 | 1       |
| 1 | 0 | 1 | 1       |
| 1 | 1 | 0 | invalid |
| 1 | 1 | 1 | invalid |